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| 09/683,199      | 11/30/2001  | Kanghua Chen         | 201-0936KAV         | 1044             |

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SEED INTELLECTUAL PROPERTY LAW GROUP PLLC  
701 FIFTH AVE  
SUITE 6300  
SEATTLE, WA 98104-7092

EXAMINER

LAM, THANH

ART UNIT

PAPER NUMBER

2834

DATE MAILED: 12/10/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.  
09/683,199

Applicant(s)  
Chen et al.

Examiner  
Thanh Lam

Art Unit  
2834



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claims \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some\* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\*See the attached detailed Office action for a list of the certified copies not received.

- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-848)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

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**DETAILED ACTION**

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-18 are rejected under 35 U.S.C. 102(b) as being anticipated by Selci.

Selic discloses an electric motor cooling assembly, comprising: a housing ; a stator (6) disposed within the housing, the stator operable for generating a magnetic field; a rotor (5) disposed within the housing, the rotor operable for receiving the magnetic field and generating a torque; a winding operatively connected to the stator; an end-winding (9) integrally formed with the winding; a jet impingement device (16) operable for exposing the end-winding to a temperature controlled stream of fluid.

Regarding claim 2, Selci discloses an the jet impingement device comprises an inlet, the inlet operable for introducing and exposing the temperature controlled stream of fluid to the end-winding.

Regarding claim 3, Selci discloses the jet impingement device comprises an outlet, the outlet operable for removing fluid from the housing.

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Regarding claim 4, Selic discloses the inlet comprises a nozzle, the nozzle operable for directing the temperature controlled stream of fluid to the endwinding.

Regarding claim 5, Selic discloses the temperature controlled stream of fluid comprises air.

Regarding claim 6, Selic discloses the jet impingement device comprises a temperature controlled fluid generating device.

Regarding claim 7, Selic discloses the jet impingement device comprises a pathway for the temperature controlled fluid from the temperature controlled fluid generating device to the inlet.

Regarding claim 8, Selic discloses a method for transferring heat between a stream of fluid impinging the surface of an electric motor end-winding and an electric motor end-winding, comprising: controlling the temperature of a volume of fluid; establishing a stream of fluid from the volume of fluid to an inlet; delivering the temperature controlled fluid from the inlet to the end-winding such that heat is transferred between the surface of the end-winding and the stream of fluid impinging the surface of the end-winding; and removing fluid from the electric motor via an outlet.

Regarding claim 9, Selic discloses the temperature controlled fluid comprises air.

Regarding claim 10, Selic discloses the temperature controlled fluid is generated in a fluid generating device.

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Regarding claim 11, Selic discloses the fluid generating device comprises a pathway for the temperature controlled fluid from the temperature controlled fluid generating device to the inlet.

Regarding claim 12, Selic discloses 2. An electric motor, comprising: a housing; a stator disposed within the housing, the stator operable for generating a magnetic field; a rotor disposed within the housing, the rotor operable for receiving the magnetic field and generating a torque; a winding operatively connected to the stator; an end-winding comprising the ends of the stator winding, integrally formed with the winding; a jet impingement device (16) operable for exposing the end-winding to a temperature controlled stream of fluid.

Regarding claim 13, Selic discloses the housing comprises an inlet, the inlet operable for introducing and exposing the temperature controlled fluid to the end-winding.

Regarding claim 14, Selic discloses the housing comprises an outlet operable for removing fluid from the housing.

Regarding claim 15, Selic discloses the inlet comprises a nozzle, the nozzle operable for directing the temperature controlled stream of fluid to the end-winding.

Regarding claim 16, Selic discloses the temperature controlled stream of fluid comprises air.

Regarding claim 17, Selic discloses the jet impingement device comprises a temperature controlled fluid generating device.

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Regarding claim 18, Selic discloses the jet impingement device comprises a pathway for the temperature controlled fluid from the temperature controlled fluid generating device to the inlet.

3. Claims 1, 8, 12 are rejected under 35 U.S.C. 102(b) as being anticipated by Snuttjer et al.

Snuttjer et al. (See fig. 1) disclose an electric motor cooling assembly, comprising: a housing (55); a stator (16) disposed within the housing, the stator operable for generating a magnetic field; a rotor (5) disposed within the housing, the rotor operable for receiving the magnetic field and generating a torque; a winding operatively connected to the stator; an end-winding (22) integrally formed with the winding; a jet impingement device (34) operable for exposing the end-winding to a temperature controlled stream of fluid.

Regarding claim 8, Snuttjer et al (see fig. 1) disclose a method for transferring heat between a stream of fluid impinging the surface of an electric motor end-winding and an electric motor end-winding, comprising: controlling the temperature of a volume of fluid; establishing a stream of fluid from the volume of fluid to an inlet; delivering the temperature controlled fluid from the inlet to the end-winding such that heat is transferred between the surface of the end-winding and the stream of fluid impinging the surface of the end-winding; and removing fluid from the electric motor via an outlet.

Regarding claim 12, Snuttjer et al (see fig. 1) disclose an electric motor, comprising: a housing; a stator disposed within the housing, the stator operable for generating a magnetic field; a rotor disposed within the housing, the rotor operable for receiving the magnetic field and

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generating a torque; a winding operatively connected to the stator; an end-winding comprising the ends of the stator winding, integrally formed with the winding; a jet impingement device (37) operable for exposing the end-winding (22) to a temperature controlled stream of fluid.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thanh Lam whose telephone number is (703) 308-7626. The fax phone number for this Group is (703) 305-3432.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0656.



Thanh Lam

Patent Examiner